

REMARKS

The present amendment is responsive to the Final Office Action of May 23, 2008. Entry and consideration of the foregoing amendment and the remarks below is respectfully requested.

In the foregoing amendment, claims 1, 7 and 8 have been amended. It is submitted that claims 1 to 8 are all distinguished from the references cited by the Examiner, as explained in detail below.

Telephone Interview

In a telephone interview between the Examiner and the undersigned representative which took place on July 30, 2008, the foregoing claim amendments were discussed, along with the cited Zhang (CN 2522029Y) and Xu (6,634,674) references. The Examiner agreed that the proposed amendments to the claims would overcome the rejection based on these references made in the Final Office Action, but indicated that a further search would be needed within the art to determine patentability. Accordingly, this amendment is being submitted along with a Request for Continued Examination and the associated fee in order to continue prosecution of this application and allow the Examiner to conduct an updated search.

Claim Rejections Under 35 USC 103

In the Office Action, the Examiner has rejected claims 1 to 8 as obvious over Zhang (CN 2522029Y) in view of Xu (WO 0150939).

This rejection is hereby respectfully traversed, and it is submitted that these claims are not obvious in view of the cited references, both since the combination of references itself is not obvious, and also because the combination would not result in the invention as claimed in claim 1 or any of the rejected claims which depend from claim 1.

An invention is unpatentable if the differences between it and the prior art would have been obvious at the time of the invention. In order to establish obviousness, it is necessary to identify the reason why a person of ordinary skill in the art would have combined the prior art in the manner claimed. Additionally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed

combination and the reasonable expectation of success must both be found in the prior art, and not based on Applicant's disclosure.

In the present case, the two prior art references do not teach or suggest all claim limitations of claim 1. As stated by the Examiner on pages 2 to 3, "Zhang fails to disclose that the detent holes penetrate through the wall of the inner pipe from said outer surface to said inner surface or that the inner pipe has a separate inner liner layer fixed to the inner surface for isolating vacuum of the inner pipe from the detent holes." The Examiner contends that these elements which are lacking from Zhang are taught by Xu. However, Xu does not teach a separate inner liner layer which is fixed or secured to the inner surface of the inner pipe 6 (Figure 9) in which detent holes 21 are formed. Instead, the controlling rod 7 is completely separate from the inner pipe 6 and is secured to operating device 9. As stated by Xu in column 2, lines 61 to 65 (applying also to Figures 8 and 9):

"Pulling the operating device 9 forward or backward can...pull controlling rod 7 to move axially *along the inner wall of inner pipe 6* to control outer layer oriented groove 11 to coincide or stagger with inner layer oriented groove 14." (emphasis added).

The only way in which the locking member can extend through the groove or opening in the inner pipe to lock the outer and inner pipes in position is by moving the operating device 9 so that one of the grooves or indents in the rod 7 is aligned with a hole or opening in the inner pipe 6, as seen in Figure 1. Figures 1 and 2 clearly illustrate that the controlling rod 7 is not secured at a fixed position to the inner surface of inner pipe 1, 6, since it has moved axially relative to the inner pipe in the position shown in Figure 2.

The Examiner specifically refers to Figures 8 and 9 (Embodiment 5) of Xu in rejecting claim 1. As in Figures 1 and 2, the controlling rod 7 in this embodiment is arranged "slidingly on the inner wall of inner pipe 6". As stated in column 5, lines 13 to 16, "When axial relative movement between controlling rod 7 and inner pipe 6 is produced, outer layer oriented groove 21 on inner pipe 6 is coincided or staggered with the inner layer oriented groove 20 on controlling rod 7." When these parts coincide, rolling ball 4 extends through groove or opening 21 into groove 20. When they are staggered, the ball cannot extend through the opening 21 and the outer pipe is free to move relative to the inner pipe (see position of Figure 2).

It is therefore respectfully submitted that Xu does not teach or suggest an inner liner layer which is fixed or secured to the inner surface of an inner pipe and not movable axially relative to

the inner pipe. Instead, it is a requirement of Xu's device that the controlling rod 7 (which the Examiner interprets as a liner layer) slides and moves axially relative to the inner pipe. Without this relative movement, Xu's locking device would not work. An element which slides relative to another part is not fixed or secured to the other part. The purpose of the controlling rod 7 in Xu is not to isolate vacuum, but to control locking and unlocking of the outer and inner pipes. This is completely different from the purpose of the inner liner layer of the present invention.

There is clearly no reason suggested by Xu to modify Zhang on the lines of the claimed invention. Even if Zhang was provided with Xu's actuating mechanism, the invention of claim 1 would not be achieved. Such a modification of Zhang would require a complete re-design of Zhang's product, replacing the existing actuator with Xu's more complex, two part actuator 9 and locking mechanism 2, 3, 4, while installing actuator controlling rod 7 inside Zhang's inner tube 1. At the bottom of page 3, the Examiner suggests that one skilled in the field would not replace the existing locking device of Zhang, but would simply add the Xu actuator to provide an alternative mechanism for adjusting the suction tube length. This would add considerably to the complexity and expense of the device, and may not be operable in any case. In order to modify Zhang as the Examiner proposes, the indents shown on the inner pipe would have to be replaced by through holes and the controlling rod would have to be installed. With the controlling rod installed, the existing lock mechanism would not work unless a groove in the controlling rod were aligned with one of the through holes, making the existing lock mechanism completely superfluous, since it could not be operated independently from the Xu mechanism.

It is clearly not Xu's intent that the controlling rod acts in any way as a vacuum seal, since it is a completely separate part from the inner tube 6 (see Figure 9) and is not in sealing engagement with the inner surface of tube 6. In any case, Zhang's structure does not involve through holes in the inner tube, so vacuum sealing of such holes is not a problem to be overcome by Zhang.

There is therefore no reason why one skilled in the field would consider combining these references, since Xu's mechanism does not appear to have any advantages over Zhang. Both structures allow adjustment of the length of a suction tube. The Examiner states that incorporation of Xu's actuating mechanism on Zhang's suction tube would "allow a user to adjust the length of the suction tube by whichever mechanism is more convenient during use ...". As noted above, it would be impossible to re-design Zhang's suction tube to incorporate both

Xu's actuating mechanism and Zhang's existing locking mechanism. Such a re-design would render Zhang's existing locking mechanism inoperative. Even if such a re-design were possible, the combined teachings of these references do not suggest any advantage to such a combination. Finally, even if the actuating mechanism described by Xu were to be used in Zhang, the invention as claimed in amended claim 1 would still not be achieved, as explained above, since the controlling rod 7 must be slidable and movable axially relative to the inner tube 6 for Xu's device to work. Neither Zhang nor Xu describe or suggest an inner liner layer which is secured to the inner pipe and which is therefore not movable axially relative to the inner pipe.

It is respectfully submitted that Examiner has not identified any valid reason why a person of ordinary skill in the art would have combined these references, and the prior art references do not teach or suggest all the claim limitations. Specifically, neither reference suggests the inner liner layer secured to the inner pipe as defined in amended claim 1. It is therefore respectfully submitted that claim 1 is not obvious in view of Xu and Zhang. In the telephone interview discussed above, the Examiner agreed that amended claim 1 overcomes the rejection based on Xu and Zhang, and reversal of this rejection is therefore respectfully requested.

Claims 2 to 8 depend from claim 1 and are distinguished from the cited references for the same reasons as claim 1. Additionally, some of the dependent claims define other limitations which are not taught or suggested by the references. Referring to claim 8, the controlling rod 7 in Xu, which the Examiner identifies as equivalent to an inner liner layer, does not have any end sealing members at two ends of a groove which extend between the outer surface of an inner liner tube and the inner surface of said inner tube to block the clearance between the outer surface of any inner liner tube and the inner surface of said inner pipe. The structure referred to by the Examiner which attaches the control rod 7 to actuator 9 is not intended to seal the inner pipe, both since it does not extend between the inner liner layer and inner surface of the inner pipe, and also since the lateral extent of this structure is not clear from the drawings (i.e. it may not even completely cover any gap between the control rod 7 and inner tube 6). Second, there cannot be any such structure at the opposite end of control rod 7 since it would prevent the required relative axial movement between the rod 7 and inner tube 6 as taught by Xu (see Figures 1 and 2 and associated description of operation cited above, as well as Fig. 8 and 9). Xu therefore completely lacks any end sealing members as defined in claim 8.

The Examiner takes official notice that it is desirable to prevent loss of vacuum pressure in suction tubes. This may well be the case, but Zhang's structure does not have any problem with potential loss of vacuum pressure through openings in an inner tube, since no such openings exist, and Xu does not address loss of vacuum pressure. Xu's controlling rod could not be used as a vacuum seal due to the need for it to move axially relative to the inner tube. Zhang's inner pipe already has no openings and therefore no vacuum loss problems, so why change the detents to pass completely through the wall of the inner pipe? The best way to prevent loss of vacuum pressure in Zhang would be not to change the indents in Zhang's inner pipe to through holes, rather than to change them to through holes, add Xu's actuator, then try to work out how to prevent vacuum loss when Xu completely fails to address this problem. It is respectfully submitted that the Examiner's comments in paragraph 8 are actually further evidence of the non-obviousness of the proposed combination of Zhang and Xu.

It is therefore respectfully submitted that claims 1 to 8 are not obvious in view of the references cited by the Examiner. Reconsideration and reversal of all claim rejections based on these references is respectfully requested, as agreed by the Examiner in the telephone interview referenced above.

CONCLUSION

The foregoing amendment and argument deals with all outstanding grounds of objection and rejection. It is submitted that all claims remaining in this application, specifically claims 1 to 8, are now in condition in all respects for allowance, and early notice to this effect is earnestly solicited.

If the Examiner finds any remaining impediment to the prompt allowance of these claims which could be clarified with a telephone conference, the Examiner is respectfully requested to initiate the same with the undersigned.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to **Deposit Account No. 502075**.

Respectfully submitted,

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Dated: August 20, 2008

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